

The specification has also been amended to correct grammatical and idiomatic errors.

No new matter within the meaning of §132 has been included by any of the amendments.

Accordingly, Applicants respectfully request the Examiner enter the amendments and to reconsider and allow all claims pending in this application.

1. Objection to the Specification

The Office Action objects to the specification as being replete with grammatical and idiomatic errors.

Applicants have amended the specification as requested to correct grammatical and idiomatic errors.

Accordingly, Applicants respectfully request the Examiner to remove the objection to the specification.

**2. Rejection of claim 1 under
35 U.S.C. §102(a)**

The Office Action rejects claim 1 under 35 U.S.C. §102(a) as being anticipated by "Creating Cataract in a Pig Eye", J. Refractive Surg., May 1999 ("Sugiura et al."). The Office Action states:

Sugiura discloses a model of an eye with cataract comprising a pig's eye which has hardening chemicals injected into the lens.

Applicants respectfully traverse the rejection because Sugiara et al. is not a proper 102(b) reference. In particular, Sugiara et al. does not teach each and every claimed limitation insofar as no disclosure relates to injecting self hardening chemicals selected from the group consisting of dibenzylidenesorbitol, polyhydric alcohol, methylbenzaldehyde, ethyl benzaldehyde and xylitol into an empty pig's eye.

Turning to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

The prior art reference must also be enabling, thereby placing the allegedly disclosed matter in the possession of the public. In re Brown, 329 F.2d 1006, 1011, 241 USPQ 245, 249 (C.C.P.A. 1964). In order to accomplish this, the reference must be so particular and definite that from it alone, without

experiment or the exertion of his own inventive skill, any person versed in the art to which it pertains could construct and use it. Id. at 250.

In the present application, amended claim 1 recites a pig's eye which is prepared by injecting specific self hardening chemicals into a crystalline lens capsule of an empty pig's eye. Sugiara et al., however, provides absolutely no teachings relating to a self-hardening chemical. In particular, Sugiara et al. is solely limited to chemicals that denature and harden crystalline eye proteins. However, the nucleus lens of the presently claimed invention are empty and do not contain crystalline eye proteins.

The distinction is an important one because Sugiara et al. teaches hardening a lens nuclei by reducing the elasticity of the anterior capsules by injecting a mixture of formalin and alcohol (ethanol or 2-propanol or both) into the lens. Formalin then hardens the crystalline proteins in the lens by denaturing the lens proteins. In contrast, the presently claimed invention uses self hardening chemicals which do not denature and harden the crystalline proteins in the eye. Therefore, an empty pig's eye can be used.

One advantage provided by self hardening agents is that the

nucleus lens is not chemically altered. For example, when a denaturing chemical such as formalin is injected into the lens the nucleus lens takes on a cloudy nature and tends to harden to the point where its usefulness as a training model is significantly lowered.

Another advantage relates to a training situation wherein the nucleus lens falls into the corpus vitreum. In particular, a nucleus lens commonly falls into the corpus vitreum during a training enucleating operation of a nucleus lens from a lens capsule. Because the lens is formed by self hardening type chemicals, the nucleus lens of the presently claimed invention can be advantageously carried out even though the nucleus lens is no longer present. On the other hand, the model disclosed in Sugiara et al. cannot be used in a training enucleating operation to restore a fallen nucleus lens because the crystalline eye proteins of the nucleus lens must be present in order for the gelling agent to harden the lens.

Clearly, each and every claimed is not taught by Sugiara et al. insofar as the presently claimed invention recites specific self-hardening chemicals used in an empty pig's eye.

Accordingly, Applicants respectfully submit that the presently claimed invention is novel over the cited reference

and respectfully request the Examiner to reconsider and withdraw the 102(a) rejection.

**3. Rejection of claims 2-3 and 5 under
35 U.S.C. 103(a)**

The Office Action rejects claims 2-3 and 5 under 35 U.S.C. §103 (a) as being unpatentable over "Creating Cataract in a Pig Eye", J. Refractive Surg., May 1999 ("Sugiura et al."). The Office Action states:

While Sugiura does not disclose that the lens capsule is empty as claimed in claims 2 and 3, injecting chemicals into an empty lens capsule would have been obvious to one of ordinary skill in the art as an aesthetic choice of design and for the purpose of allowing the user to simulate a cataract solely using chemicals. Also, although the location of the injection of claim 5 is not disclosed by Sugiura, the claimed location does not appear to yield any unexpected advantages over the location disclosed by Sugiura, and thus would also have been obvious to one of ordinary skill in the art as an aesthetic choice of design.

Applicants respectfully traverse this rejection because the Office Action fails to establish all three prongs necessary for a *prima facie* case of obviousness. The Office Action fails to provide any convincing line of reasoning which would lead the ordinarily skilled artisan to modify the references to derive

the subject matter as defined in newly amended claims. In particular, nowhere does Sugiara et al. teach the use of specific self hardening chemicals or injecting said chemicals into an empty lens capsule.

The Federal Circuit ruled that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and 3) that the prior art references teach or suggest all claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

A *prima facie* case of obviousness must also include a showing of the reasons why it would be obvious to modify the references to produce the present invention. See Ex parte Clapp, 277 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The Examiner bears the initial burden to provide some convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings. Id. at 974.

In the present application, claim 2 has been deleted and incorporated into claim 3. Remaining independent claim 3 now recites a model for cataract surgery in the corpus vitreum,

wherein a **false** nucleus of a cataract is prepared by injecting self hardening chemicals selected from the group consisting of dibenzylidenesorbitol, polyhydric alcohol, methylbenzaldehyde, ethyl benzaldehyde and xylitol into an empty crystalline lens capsule of a pig's eye wherein said crystalline lens capsule of said pig's eye is empty.

In particular, and as provided *supra*, Sugiara et al. merely teaches hardening the crystalline proteins in the lens with formalin. However, the presently claimed invention of claims 3 and 5 recite an **empty** lens. Formalin cannot harden the lens if the lens do not contain crystalline eye proteins.

The advantage of the presently claimed invention relates to a common training situation wherein the nucleus lens falls into the corpus vitreum. Because the lens is formed by self hardening type chemicals, the nucleus lens of the presently claimed invention can be advantageously carried out even though the nucleus lens is no longer present or alternatively formed into a false nucleus lens by the self hardening chemicals of the present invention.

On the other hand, the model disclosed in Sugiara et al. cannot be used in a training enucleating operation to restore a fallen nucleus lens because the crystalline eye proteins of the

nucleus lens must be present in order for the gelling agent to harden the lens. By injecting the self hardening agents of the presently claimed invention into the capsule lens, a false nucleus can be formed in the lens capsule, thereby forming a cost effective and cheap alternative to non-enucleated lenses.

Regarding the assertion that injecting chemicals into an empty lens is a mere aesthetic design choice, Applicants note that creation of a false lens in order to account for a falling nucleus lens is a critical feature unrelated to aesthetics. Clearly, each and every claimed limitation is not taught by Sugiyara et al. Moreover, the reference fails to provide motivation or suggestion to make the presently claimed invention. Therefore, a *prima facie* case of obviousness has not been established.

Accordingly, Applicants respectfully submit that the presently claimed invention is unobvious over the cited reference and respectfully request the Examiner to reconsider and withdraw the 103(a) rejection.

4. Rejection of claims 6 and 8-9 under
35 U.S.C. 103(a)

The Office Action rejects claims 6 and 8-9 under 35 U.S.C.

\$103(a) as being unpatentable over "Creating Cataract in a Pig Eye", J. Refractive Surg., May 1999 ("Sugiura et al.") in view of "Polymer Gelation Due to the Self Assembly of Dibenzylidene Sorbitol and Its Derivatives", Statistical Thermodynamics N.C. State Univ., (June 01, 1999) ("Wilder"). The Office Action states:

Creating Cataract discloses all of the limitations of claims 5-7 with the exception of the use of dibenzylidene sorbitol. Dibenzylidene sorbitol is a known gelling agent which forms three dimensional fibrillar networks in organic substances, as disclosed by Wilder. It would have been obvious to one of ordinary skill in the relevant art to modify the model disclosed by Creating Cataract by providing dibenzylidene sorbitol for the purpose of hardening the eye to produce a simulated cataract.

Applicants respectfully traverse this rejection because the Office Action fails to establish all three prongs necessary for a *prima facie* case of obviousness. The Office Action also fails to provide any convincing line of reasoning which would lead the ordinarily skilled artisan to modify the references to derive the subject matter as defined in the subject claims. In particular, Wilder fails to teach polyhydric alcohol, methylbenzaldehyde, ethyl benzaldehyde and xylitol and also

fails to provide any motivation or suggestion to use the self hardening chemicals in an empty pig's eye.

The Federal Circuit ruled that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and 3) that the prior art references teach or suggest all claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

A *prima facie* case of obviousness must also include a showing of the reasons why it would be obvious to modify the references to produce the present invention. See Ex parte Clapp, 277 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The Examiner bears the initial burden to provide some convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings. Id. at 974.

In the present application, claim 9 has been deleted and been incorporated into the independent claims wherein claim 1 recites a model for cataract surgery in the corpus vitreum, comprising a pig's eye which is prepared by injecting self hardening chemicals selected from the group consisting of

dibenzylidenesorbitol, polyhydric alcohol, methylbenzaldehyde, ethyl benzaldehyd and xylitol into an empty crystalline lens capsule of a pig's eye wherein said crystalline lens capsule of said pig's eye is empty.

In particular, and as provided *supra*, Sugiara et al. merely teaches hardening the crystalline proteins in the lens with formalin. However, the presently claimed invention recites an **empty** lens. Formalin cannot harden the lens if the lens do not contain crystalline eye proteins. However, neither Sugiara et al. nor Wilder teach or suggest this critical limitation. All the arguments made above in sections 2 and 3 are incorporated herein by reference.

Even assuming *arguendo* Wilder teaches dibenzylidenesorbitol suitable for the intended purpose of hardening cataract lens for a training model, the Office Action fails to establish the entire *prima facie* case because one of ordinary skill would not have been motivated to inject dibenzylidene sorbitol into an empty pig's eye. Clearly, no such showing has been made.

Accordingly, Applicants respectfully submit that the presently pending claims are unobvious over the cited references and request the Examiner to reconsider and withdraw the rejection against the presently pending claims under 35 U.S.C.

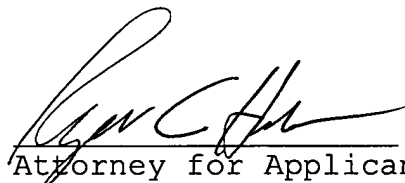
\$103.

CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is earnestly solicited.

Respectfully submitted,

SHERMAN & SHALLOWAY



Attorney for Applicants
Roger C. Hahn
Reg. No. 46,376

SHERMAN AND SHALLOWAY

P.O. Box 788
Alexandria, Virginia 22313
(703) 549-2282

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:)	
)	Group Art Unit: 3712
UMEYAMA; NAKAKI)	
)	Examiner: K. FERNSTROM
Serial No. 09/834,886)	
)	
Filed: April 16, 2001)	

For: **A MODEL FOR TRAINING OF SURGICAL OPERATION OF CATARACT**

Appendix A

Please amend the Specification as indicated in the following marked-up copy of the Specification.

Page 1, lines 7-13:

The cataract of eye indicates the cloudy state of the crystalline lens of an eye, and is a main [and a general] complaint [to cause] of an eye sight injury or [loosing of] sight loss. The cataract of old aged people's eye is [the majority] in the cataract of a human's eye. A method to extract a crystalline lens or a phacoemulsification and aspiration method can be mentioned as the concrete examples of [method] methods for [a] medical treatment. To learn a skill and a technique of a surgical operation of cataract, many exercises for surgical operation training are carried out.

Page 1, lines 14-22:

In general, a pig's eye is used as a training model for a surgical operation of cataract of a human's eye, assuming that the pig's eye is the human's eye suffering from eye cataract. In this case, a pig's eye is taken off from a butchered pig, and the age of the butchered pig is about 6 to 8 months. [So] However, a provided pig's eye from a young pig is [of course] not suffering from eye cataract[, that is one of the concrete sign of symptoms of aging]. Further, since the tissue and hardness of a pig's eye are different from those of a human's eye, the conventional training method for a surgical operation of cataract that uses a pig's eye is [pretty] different from the actual surgical operation of cataract [of] for a human's eye.

Page 1, lines 23-28:

Further, in a case of an enucleating operation, the falling down of a lens into corpus vitreum is considered to be the worst failure in the surgical operation of cataract. And, if the fallen lens is left as it is, it causes inevitably [loosing a] loss of sight [of eye], therefore, it is necessary to carry out an enucleating operation to enucleate the fallen nucleus lens immediately. However, nowadays, there is not an appropriate training model or training method to learn the technique of the enucleating operation.

Page 3, lines 5-9:

The training model used in the present invention is made of a pig's eye. As mentioned above, [since] a pig's eye is [took] taken [off] from a butchered pig[, generally]. Generally, a pig's [eyes] eye for training model are provided from young pigs of about 6 to 8 months age, however, in the present invention, the pig's eye for training model is not restricted to the young butchered pig's eye.

Page 3, lines 10-19:

In the present invention, the self-hardening type chemicals [is] are injected into a capsule of crystalline lens, and there are two methods of this invention. That is, the method to inject the chemicals into a capsule of crystalline lens and the method to inject the self hardening type chemicals into an empty capsule of crystalline lens from which the whole contents are [took] taken out. Further, as another case, the method to make the hardened chemicals fall down into corpus vitreum and make exist it in corpus vitreum by breaking capsule of crystalline lens consciously at the point when the injected chemicals into an empty crystalline lens capsule is hardened can be mentioned. In this case, the hardened chemicals [is] are called as the false nucleus of cataract.

Page 3, lines 20-33:

The self hardening type chemicals to be injected into a capsule of crystalline lens of pig's eye or into an empty capsule of crystalline lens from which the contents is [took] taken out is a [chemicals] chemical which has a gelling function and indicates the similar hardness to the hardness of an old aged people's eye with cataract. As the concrete example of said chemicals, the materials mainly composed of dibenzylidenesorbitol or derivatives of it, polyhydric alcohol such as glycerin or coloring pigment can be mentioned. Dibenzylidenesorbitol is a condensed product of benzaldehyde and sorbitol. Nuclear substitution products of benzaldehyde, such as methylbenzaldehyde or sorbitol condensed product of ethyl benzaldehyde have same gelling function. Further, xylitol, which is a kind of sugar alcohol represented by sorbitol, and dibenzylidenxylitol has also same gelling function. All of these mentioned materials are the self hardening type chemicals. It is desirable to use a [chemicals] chemical mainly composed of dibenzylidenesorbitol from the view point of the environment contamination and the security of the human body.

Page 4, lines 7-9:

For the purpose to emphasize the effect of the operation, it is possible to use a pigment [together with]. As the pigment, any kind of water-soluble dye or food dye can be used.

Page 4, lines 10-17:

The detail of the present invention is more readily illustrated by the drawings. Fig. 1 and Fig. 2 are the explanatory drawings of the present invention. Fig. 1a to Fig. 1e are the drawings illustrating a case to inject the chemicals into a capsule of crystalline lens, and Fig. 2a to Fig. 2e are the drawings illustrating a case to inject the chemicals into an empty capsule of crystalline lens from which the whole contents is [took] taken out. Fig. 3a and Fig. 3b are the drawings illustrating a case which make the self hardened chemicals (false nucleus of cataract) after injected as illustrated by Fig. 2d and Fig. 2e fall into corpus vitreum by breaking posterior capsule of crystalline lens consciously.

Page 4, lines 18-30:

Fig. 1a is a drawing illustrating to expose sclera (10) of a pig's eye from which organism such as outer muscle of eyeball or tennon capsule are cut off. The sclera of posterior pole of eyeball (7) of pig's eye in such a condition is bored by a piercing scalpel. [While, the] The self-hardening type chemicals (2) is then filled up in a cylinder of syringe (1) to which a 27G dull needle (3) is attached. Then said needle of syringe is inserted to a pig eye through an injury arranged previously by thrusting to the

sclera of posterior pole of eyeball. Then a posterior capsule of crystalline lens (8) is thrust and [stop] stopped just under the anterior capsule (9) (refer to Fig. 1b). After that, as shown in Fig. 1c, at the position just under the anterior capsule, when chemicals contained in a cylinder of syringe is injected into anterior capsule of crystalline lens, the chemical substance is spread circularly (drawn by oblique lines). After several minutes [past] pass, the chemicals [is] are hardened by itself, and a pig's eye with cataract just like a human's eye with cataract can be obtained (refer to Fig. 1d).

Page 5, lines 1-8:

Secondly, a method to inject self hardening type chemicals after contents in crystalline lens are [took] taken off is illustrated. At the first stage, as shown in Fig. 2a, an anterior capsule (9) of pig's eye is circularly cut off previously, and the whole contents in crystalline lens [is] are removed by a phacoemulsification and aspiration apparatus. Then, as shown in Fig. 2b, self hardening type chemicals (6) [is] are injected into the empty crystalline lens capsule (5) by means of above mentioned syringe (1) (refer to Fig. 2c). After [leave] leaving it for 5 to 10 minutes, a pig's eye with cataract just like a human's eye with cataract can be obtained (refer to Fig. 2d).

Page 5, lines 14-18:

The chemicals (2) used in the case of Fig. 1 which is injected into crystalline lens capsule and the chemicals (6) used in the case of Fig. 2 which is injected into the empty crystalline lens capsule from which whole contents are [took] taken off can be the same substance, or the different substance to which glycering or pigments are added by various ratio can be voluntarily used.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:)	
)	Group Art Unit: 3712
UMEYAMA; NAKAKI)	
)	Examiner: K. FERNSTROM
Serial No. 09/834,886)	
)	
Filed: April 16, 2001)	

For: **A MODEL FOR TRAINING OF SURGICAL OPERATION OF CATARACT**

Appendix B

Please amend the Specification as indicated in the following clean copy of the Specification.

Page 1, lines 7-13:

C1
The cataract of eye indicates the cloudy state of the crystalline lens of an eye, and is a main complaint of an eye sight injury or sight loss. The cataract of old aged people's eye is in the cataract of a human's eye. A method to extract a crystalline lens or a phacoemulsification and aspiration method can be mentioned as the concrete examples of methods for medical treatment. To learn a skill and a technique of a surgical operation of cataract, many exercises for surgical operation training are carried out.

Page 1, lines 14-22:

C2 In general, a pig's eye is used as a training model for a surgical operation of cataract of a human's eye, assuming that the pig's eye is the human's eye suffering from eye cataract. In this case, a pig's eye is taken off from a butchered pig, and the age of the butchered pig is about 6 to 8 months. However, a provided pig's eye from a young pig is not suffering from eye cataract. Further, since the tissue and hardness of a pig's eye are different from those of a human's eye, the conventional training method for a surgical operation of cataract that uses a pig's eye is different from the actual surgical operation of cataract for a human's eye.

Page 1, lines 23-28:

C3 Further, in a case of an enucleating operation, the falling down of a lens into corpus vitreum is considered to be the worst failure in the surgical operation of cataract. And, if the fallen lens is left as it is, it causes inevitably loss of sight, therefore, it is necessary to carry out an enucleating operation to enucleate the fallen nucleus lens immediately. However, nowadays, there is not an appropriate training model or training method to learn the technique of the enucleating operation.

Page 3, lines 5-9:

C4 The training model used in the present invention is made of a pig's eye. As mentioned above, a pig's eye is taken from a butchered pig. Generally, a pig's eye for training model are provided from young pigs of about 6 to 8 months age, however, in the present invention, the pig's eye for training model is not restricted to the young butchered pig's eye.

Page 3, lines 10-19:

C5 In the present invention, the self-hardening type chemicals are injected into a capsule of crystalline lens, and there are two methods of this invention. That is, the method to inject the chemicals into a capsule of crystalline lens and the method to inject the self hardening type chemicals into an empty capsule of crystalline lens from which the whole contents are taken out. Further, as another case, the method to make the hardened chemicals fall down into corpus vitreum and make exist it in corpus vitreum by breaking capsule of crystalline lens consciously at the point when the injected chemicals into an empty crystalline lens capsule is hardened can be mentioned. In this case, the hardened chemicals are called as the false nucleus of cataract.

C5 The self hardening type chemicals to be injected into a capsule of crystalline lens of pig's eye or into an empty capsule of crystalline lens from which the contents is taken out is a chemical which has a gelling function and indicates the similar hardness to the hardness of an old aged people's eye with cataract.

As the concrete example of said chemicals, the materials mainly composed of dibenzylidenesorbitol or derivatives of it, polyhydric alcohol such as glycerin or coloring pigment can be mentioned. Dibenzylidenesorbitol is a condensed product of benzaldehyde and sorbitol. Nuclear substitution products of benzaldehyde, such as methylbenzaldehyde or sorbitol condensed product of ethyl benzaldehyde have same gelling function. Further, xylitol, which is a kind of sugar alcohol represented by sorbitol, and dibenzylidenexylitol has also same gelling function. All of these mentioned materials are the self hardening type chemicals. It is desirable to use a chemical mainly composed of dibenzylidenesorbitol from the view point of the environment contamination and the security of the human body.

C6 For the purpose to emphasize the effect of the operation, it is possible to use a pigment. As the pigment, any kind of water-soluble dye or food dye can be used.

Page 4, lines 10-17:

C7 The detail of the present invention is more readily illustrated by the drawings. Fig. 1 and Fig. 2 are the explanatory drawings of the present invention. Fig. 1a to Fig. 1e are the drawings illustrating a case to inject the chemicals into a capsule of crystalline lens, and Fig. 2a to Fig. 2e are the drawings illustrating a case to inject the chemicals into an empty capsule of crystalline lens from which the whole contents is taken out. Fig. 3a and Fig. 3b are the drawings illustrating a case which make the self hardened chemicals (false nucleus of cataract) after injected as illustrated by Fig. 2d and Fig. 2e fall into corpus vitreum by breaking posterior capsule of crystalline lens consciously.

Page 4, lines 18-30:

C8 Fig. 1a is a drawing illustrating to expose sclera (10) of a pig's eye from which organism such as outer muscle of eyeball or tennon capsule are cut off. The sclera of posterior pole of eyeball (7) of pig's eye in such a condition is bored by a piercing scalpel. The self-hardening type chemicals (2) is then filled up in a cylinder of syringe (1) to which a 27G dull needle (3) is attached. Then said needle of syringe is inserted to a pig eye through an injury arranged previously by thrusting to the sclera of posterior pole of eyeball. Then a posterior capsule of crystalline

Cont
C8 lens (8) is thrust and stopped just under the anterior capsule (9) (refer to Fig. 1b). After that, as shown in Fig. 1c, at the position just under the anterior capsule, when chemicals contained in a cylinder of syringe is injected into anterior capsule of crystalline lens, the chemical substance is spread circularly (drawn by oblique lines). After several minutes pass, the chemicals are hardened by itself, and a pig's eye with cataract just like a human's eye with cataract can be obtained (refer to Fig. 1d).

Page 5, lines 1-8:

C9 Secondly, a method to inject self hardening type chemicals after contents in crystalline lens are taken off is illustrated. At the first stage, as shown in Fig. 2a, an anterior capsule (9) of pig's eye is circularly cut off previously, and the whole contents in crystalline lens are removed by a phacoemulsification and aspiration apparatus. Then, as shown in Fig. 2b, self hardening type chemicals (6) are injected into the empty crystalline lens capsule (5) by means of above mentioned syringe (1) (refer to Fig. 2c). After leaving it for 5 to 10 minutes, a pig's eye with cataract just like a human's eye with cataract can be obtained (refer to Fig. 2d).

Page 5, lines 14-18:

C10 The chemicals (2) used in the case of Fig. 1 which is injected into crystalline lens capsule and the chemicals (6) used in the case of Fig. 2 which is injected into the empty crystalline lens capsule from which whole contents are taken off can be the same substance, or the different substance to which glycering or pigments are added by various ratio can be voluntarily used.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:)	
)	Group Art Unit: 3712
UMEYAMA; NAKAKI)	
)	Examiner: K. FERNSTROM
Serial No. 09/834,886)	
)	
Filed: April 16, 2001)	

For: **A MODEL FOR TRAINING OF SURGICAL OPERATION OF CATARACT**

Appendix C

Please amend the following claims as indicated in the following marked-up copy of the amended claims.

1. (Twice Amended) A model for cataract surgery, comprising:
a pig's eye which is prepared by injecting self hardening
[type] chemicals selected from the group consisting of
dibenzylidenesorbitol, polyhydric alcohol, methylbenzaldehyde,
ethyl benzaldehyde and xylitol into a crystalline lens capsule of
said pig's eye wherein said crystalline lens capsule of said pig's
eye is empty.

2. (Deleted)

3. (Twice Amended) A model for cataract surgery in the corpus
vitreum, wherein a false nucleus of a cataract is prepared by
injecting self hardening [type] chemicals selected from the group
consisting of dibenzylidenesorbitol, polyhydric alcohol,

methylbenzaldehyde, ethyl benzaldehyde and xylitol into an empty crystalline lens capsule of a pig's eye wherein said crystalline lens capsule of said pig's eye is empty.

9. (Deleted)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:)	
)	Group Art Unit: 3712
UMEYAMA; NAKAKI)	
)	Examiner: K. FERNSTROM
Serial No. 09/834,886)	
)	
Filed: April 16, 2001)	

For: **A MODEL FOR TRAINING OF SURGICAL OPERATION OF CATARACT**

Appendix D

Please amend the following claims as indicated in the following clean copy of the amended claims.

1. (Twice Amended) A model for cataract surgery, comprising:
a pig's eye which is prepared by injecting self hardening chemicals selected from the group consisting of dibenzylidenesorbitol, polyhydric alcohol, methylbenzaldehyde, ethyl benzaldehyde and xylitol into a crystalline lens capsule of said pig's eye wherein said crystalline lens capsule of said pig's eye is empty.

2. (Deleted)

3. (Twice Amended) A model for cataract surgery in the corpus vitreum, wherein a false nucleus of a cataract is prepared by injecting self hardening chemicals selected from the group consisting of dibenzylidenesorbitol, polyhydric alcohol,

methybenzaldehyde, ethyl benzaldehyde and xylitolinto an empty
crystalline lens capsule of a pig's eye wherein said crystalline
lens capsule of said pig's eye is empty.

9. (Deleted)